

AbstractPosition Detector

5 A position detector is provided for detecting the  
relative movement of first and second members which are  
mounted for relative movement along a measuring path. One  
of the members comprises a magnetic field generator for  
generating a magnetic field and the other member  
10 comprises first and second conductors which are  
inductively coupled to said magnetic field generator.  
The arrangement of the first and second conductors and  
the magnetic field generator is such that output signals  
are generated in a first and second receive circuits  
15 whose position varies with the relative movement between  
the two members. In addition to carrying information  
relating to the relative position between the two  
members, the signals induced in the receive circuits also  
comprise information defining the relative orientation  
20 of the two movable members, and by suitable processing  
of the received signals the relative orientation of the  
two members can also be determined. In a preferred form  
of the invention, the system operates to define the  
relative position and orientation of the two movable  
25 members in first and second directions from which the  
relative orientation of the two members in a plane  
containing the two directions can be determined. The  
signals induced in the receive circuits can also be  
processed to give an indication of the gap between the  
30 two circuits and to provide an indication of the full  
relative orientation of the two members.